

# ABSTRACT

A carrier reproducing circuit capable of judging the polarity of alienation frequency. A TMCC section is detected from the  
5 synchronous detection output from a synchronous detection circuit (1) by a TMCC section detecting circuit (4), the synchronous detection output is converted to a signal point arrangement by a signal point arrangement converting circuit (5), the phase of the converted signal point position signal is rotated at a predetermined angular velocity for  
10 each symbol of the TMCC by a phase rotating circuit (8), the signal position signal whose phase is rotated is phase-detected by a phase detector (6), an auto-correlation function of the phase detection output in the TMCC section is determined by an auto-correlation function determining circuit (7) and angular velocity information  
15 based on the period of the waveform of the determined auto-correlation function is obtained, the phase-rotation angular velocity at the phase rotation circuit (8) is subtracted from the obtained angular velocity by a subtracting circuit (9), and sine and cosine wave data on frequency based on the output of the subtraction  
20 are generated and sent to the phase detection circuit (1) by a numerical control oscillator (2).